

INTERNATIONAL SEARCH REPORT

IB2004/052097

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L23/433 H01L23/495 H01L23/31

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 365 106 A (WATANABE ET AL) 15 November 1994 (1994-11-15)	1-8, 17, 18
Y	column 2, line 36 - column 3, line 30; figure 3	9-16
X	US 6 150 715 A (ICHIKAWA ET AL) 21 November 2000 (2000-11-21)	1, 2, 4-7, 17, 18
	column 4, line 15 - column 7, line 65; figures 3, 4	
Y	US 2003/164549 A1 (NAKAYAMA TOSHINORI) 4 September 2003 (2003-09-04)	9-16
	paragraphs '0121! - '0136!; figures 16-22	
X	EP 0 883 170 A (NITTO DENKO CORPORATION) 9 December 1998 (1998-12-09)	17, 18
	figures 3A-D	
	-/--	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

16 March 2005

Date of mailing of the international search report

29/03/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Edmeades, M

INTERNATIONAL SEARCH REPORT

IB2004/052097

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 703 398 A (SONO ET AL) 30 December 1997 (1997-12-30) figure 3	17, 18
A	----- US 6 444 498 B1 (HUANG CHIEN PING ET AL) 3 September 2002 (2002-09-03) figures 5-7 -----	9

INTERNATIONAL SEARCH REPORT

IB2004/052097

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5365106	A	15-11-1994	JP	2670408 B2		29-10-1997
			JP	6140548 A		20-05-1994
US 6150715	A	21-11-2000	JP	3003638 B2		31-01-2000
			JP	11054683 A		26-02-1999
			CN	1211072 A ,C		17-03-1999
US 2003164549	A1	04-09-2003	JP	2003249512 A		05-09-2003
			CN	1441472 A		10-09-2003
EP 0883170	A	09-12-1998	JP	9232475 A		05-09-1997
			EP	0883170 A1		09-12-1998
			US	6144108 A		07-11-2000
			CN	1215501 A		28-04-1999
			WO	9731394 A1		28-08-1997
US 5703398	A	30-12-1997	JP	6275759 A		30-09-1994
US 6444498	B1	03-09-2002	TW	498516 B		11-08-2002